Chapter 7

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CHAPTER 7

BUILDINGS

ARTICLE I. ADMINISTRATION

Section 7-1. Building Official.

Whenever reference is made to the duties of "certain officials" named within the 2009 International Building Code, the 2009 International Residential Code, the 2009 International Plumbing Code, 2009 International Mechanical Code, 2009 International Fuel Gas Code, and the 2009 International Energy Conservation Code, adopted in this chapter, that designated official of Temple, Texas, who has duties corresponding to those of the named official in said Codes shall be deemed to be the responsible official insofar as enforcing the provisions of said Codes are concerned.

Section 7-2. Building Board of Appeals.

(a) ***Creation and Appointment.*** A Board is hereby established to be called the Building Board of Appeals (referred to in the 2009 International Building Code as the *Building Board of Adjustments and Appeals*), which shall consist of nine (9) members. All Board members shall be appointed by the City Council. The City Council shall endeavor to appoint, when possible, two (2) architects or engineers, one person from the mechanical or air conditioning trade, two (2) master plumbers, two (2) persons from the building industry which may include a general contractor, engineer or other person at large from the building industry, and two (2) persons at large representing no specific trade.

(b) ***Term of Office.*** All members shall be appointed for terms of four (4) years, except the two (2) at-large positions representing no specific trade shall have an initial term of three (3) years. Vacancies shall be filled for an unexpired term in the manner in which original appointments are required to be made. When any member of the Board has been absent from the regular meeting of such Board for three (3) or more consecutive times, without just cause, as determined by the Board or the City Council, the member's office shall become vacant, and the chairman or acting chairman of this Board shall certify such record of absence and vacancy to the City Council which shall appoint a new member t fill the vacancy.

(c) ***Procedures and Quorum.*** Four (4) members of the Board shall constitute a quorum. In varying the application of any provisions of this Code or in modifying an order of the Building Official, or Plumbing Official, affirmative votes of the majority present, but not less than three (3) affirmative votes, shall be required. A Board member shall not act in a case in which he has a conflict of interest as that term may be defined in the City Charter, in Chapter 171 of the Local Government Code, or in other applicable laws or statutes.

(d) ***Records.*** The Building Official shall act as secretary of the Building Board of Appeals and shall make a detailed record of all its proceedings, which shall set forth the

reasons for its decisions, the vote for each member participating therein, the absence of a member and any failure of a member to vote.

(e) ***Procedure.*** The Board shall establish rules and regulations for its own procdure not inconsistent with the provisions of this Chapter. The Board shall meet at regular intervals to be determined by the chairman, or, in any event, the Board shall meet within ten (10) days after notice of appeal has been received.

(f) ***Advisory Responsibility of the Board.*** The Board shall submit to the City Council such recommendations for the improvement and revision of the 2009 *International Building Code*, the 2009 *International Mechanical Code*, the 2009 *International One and Two Family Dwelling Code*, the 2009 *International Plumbing Code*, the 2009 *International Gas Code*, 2009 *International Energy Code* or the 2009 *International Fire Code* as it may from time to time deem necessary and proper in the light of the development of the new materials, methods or techniques which would result in better and more economical installations, and to keep abreast of new developments in applicable portions of the 2009 *International Building Code*, the 2009 *Mechanical Code*, the 2009 *One and Two Family Dwelling Code*, the 2009 *International Plumbing Code*, the 2009 *International Gas Code*, the 2009 *International Energy Code* and the 2009 *International Fire Prevention Code*. All requests for use of materials or methods not covered in this Code shall be fully supported by factual evidence, or prior approval from recognized testing agency or such other impartial qualified authority acceptable to the Board.

Section 7-3. Appeals; Time Limit.

(a) Whenever the Building Official, or his designee, shall reject or refuse to approve the mode or manner of construction purposed to be followed, or materials to be used in the erection or alteration of a building or structure, or when it is claimed that the provisions of this Code do not apply, or that an equally good more desirable form of construction can be employed in any specific case, or when it is claimed that the true intent and meaning of this Code, or any of the regulations thereunder have been misconducted or wrongly interpreted, the owner of such building or structure, or his duly authorized agent, may appeal from the decision of the Building Official or his designee to the Building Board of Appeals. Notice of appeal shall be in writing and filed within ninety (90) days after decision is rendered by the Building Official. A fee of ten dollars ($10.00) shall accompany the notice of appeal.

(b) In case of a building or structure, which, in the opinion of the Building Official is unsafe or dangerous, the Building Official may, in his order, limit the time for such appeal to a shorter period. Appeal hereunder shall be on forms provided by the Building Official.

Section 7-4. Decisions of the Building Board of Appeal.

(a) *Variances and Modifications.*

(1) The Building Board of Appeals, when so appealed to and after hearing, may grant a variance to the application of any provision of the 2009 *International Building Code*, the 2009 *International Residential Code*, the 2009 *International Plumbing Code*, the 2009 *International Mechanical Code, the* 2009 *International Fuel Gas Code*, and the 2009 *Energy Conservation Code* to any particular case when, in its opinion, the enforcement thereof would do manifest injustice, and would be contrary to opinion, the interpretation of the Building Official or his designee should be modified or reversed.

(2) A decision of the Building Board of Appeals to vary the application of any provision of this Code or to modify an order the Building Official or his designee shall specify in what manner such variance or modification is made, the conditions upon which it is made and the reason therefore.

(b) *Decisions.*

(1) Every decision of the Building Board of Appeals shall be final, subject, however, to such remedy as any aggrieved party might have at law or in equity. It shall be in writing and shall indicate the vote upon the decision. Every decision shall be promptly filed in the Office of the Building Official, and shall be open to public inspection; a certified copy shall be sent by mail or otherwise to the appellant and a copy shall be kept publicly posted in the Office of the Building Official for two (2) weeks after filing.

(2) The Building Board of Appeals shall, in every case, reach a decision without unreasonable or unnecessary delay.

(3) If a decision of the Building Board of Appeals reverses or modifies a refusal, order or disallowance of the Building Official or his designee, or varies the application of any provisions of this Code, the Building Official or his designee shall immediately take action in accordance with such decision.

Section 7-5 – 7-20 Reserved.

ARTICLE II. ADMINISTRATION

Section 7-21. Building Code.

The City of Temple adopts, as part of its Building Regulations, the 2009 *International Building Code*, as it now exists and as it may be revised from time to time, including appendices. A copy of the *International Building Code* shall be maintained in the office of the Building Official.

Section 7-22. Amendments.

What follows are additions, deletions and amendments to the 2009 *International Building Code*.

(a) *Permits*. Chapter 1, "Administration," Section 105, "Permits," Subsection 105.2 "Work exempt from a permit" is amended as follows:

Delete sections 1, 2, and 6.

(b) *Temporary Structures and Uses*. Chapter 1, "Administration," Section 108 "Temporary Structures and Uses," Subsection 108.3 "Temporary Power" is amended as follows:

Delete the "ICC Electrical Code" and replace with 2008 *National Electrical Code* and City of Temple Electrical Code.

(c) *Fees.* Chapter 1, "Administration," Section 109 "Fees," Subsection 109.1 "Permit Fees" shall be amended as follows:

109. Permit Fees.

The City Council shall adopt by resolution a schedule of the permit fees required or authorized by the 2009 *International Building Code*, a copy of which shall be maintained in the office of the Building Official.

(d) *Board of Appeals*. Chapter 1, "Administration," Section 113 "Board of Appeals," Subsection 113.1 shall be deleted and replaced with Section 7-2, "Building Board of Appeals" found within this document.

(e) *Private garages.* Chapter 4, "Special Detailed Requirements Based on Use and Occupancy," Section 406, "Motor-Vehicle-Related Occupancies," Subsection 406.1 "Private garages and carports," 406.1.2 (2) shall be amended as follows:

The fire separation distance shall be changed from 5 to 10 feet.

Section 7-23 – 7-40 Reserved.

ARTICLE III. MECHANICAL CODE

Section 7-41. Adopted.

The City of Temple adopts as part of its buildings regulations the 2009 *International Mechanical Code* as it now exists and as it may be revised from time to time. A copy of the 2009 *International Mechanical Code* shall be maintained in the office of the Building Official.

Section 7-42 – 7-60 Reserved.

ARTICLE IV. 2009 INTERNATIONAL RESIDENTIAL CODE FOR ONE AND TWO FAMILY DWELLING

Section 7-61. Adopted.

The City of Temple adopts as part of its building regulations the 2009 *International Residential Code for One and Two Family Dwelling* as it now exists and as it may be revised from time to time. A copy of the 2009 *International Residential Code for One and Two Family Dwelling* shall be maintained in the office of the Building Official.

Section 7-62. Amendments.

The City of Temple adopts certain amendments to the 2009 *International Residential Code for One and Two Family Dwelling* which amendments shall be maintained in the office of the Building Official.

(a) *Work exempted from permits*. Chapter 1, "Administration," Section 105, "Permits," R105.2 "Work exempt from permit" shall be amended as follows:

(1) Sections 1, 2, 3, 4, 5 and 10 shall be deleted.

(2) R105.2.3 be amended as follows:

The reference to four feet shall be replaced with two feet.

(3) Any reference to the "ICC Electrical Code" and replace with 2008 *National Electrical Code* and City of Temple Electrical Code, Chapter 10.

(b) *Manufacture's instillation instructions.* Chapter 1, "Administration," Section 106, "Permits," R106.1.2. Manufacture's installation instructions shall be amended by deleting the words "on the job site."

(c) *Manufacture's instillation instructions.* Chapter 1, "Administration," Section 610, "Permits," R106.3.1 "Approval of construction documents" shall be amended to read as follows:

When the building official issues a permit, the construction documents shall be made available and shall be open to inspection by the Building Official or his or her authorized representative.

(d) *Frame and Masonry Inspection.* Chapter 1, "Administration," Section 109 "Inspections," R109.1.4 **"**Frame and masonry inspection" shall be amended by deleting the word masonry throughout the entire section.

(e) Certificate of Occupancy, Chapter 1, "Administration," Section 110, "Certificate of Occupancy," shall be amended by deleting Sections R110.1; R110.4; R110.3; and R110.5

(f) *Board of Appeals*. Chapter 1, "Administration," Section 112 "Board of Appeals," shall be deleted and replaced with Section 7-2, "Building Board of Appeals" found within this document.

(g) *Attics*. Chapter 2, "Definitions," "Attic, Habitable," shall be amended by deleting the reference to "unfinished."

(h) *Handrails*. Chapter 3, "Means of Egress," Section 311, "Ramps," Subsection 311.8.3, "Handrails required," 311.8.3.1, "Height," shall be amended to delete 34 and 38 inches and replace with 28 and 36 inches respectively.

(i) *Foundation Anchorage.* Chapter 4, "Foundation," Section 403.1, "Footing," 403.1.6 "General," shall be amended as follows:

Shall extend a minimum of 8" inches in length (178mm) into concrete or grouted cells of concrete masonry units.

(j) *Foundation Elevation*. Chapter 4, "Foundation," Section 403.1, "Footing," Subsection 403.1.7, "Footing on or adjacent to slope," R 403.1.7.3 shall be deleted and individuals must comply with the City's drainage ordinance.

(k) *Truss design drawings*. Chapter 5, "Floors," Section 502, "Wood floor framing," Subsection 502.11, "Wood Trusses," 502.11.4 "Truss design drawings," shall be amended by deleting the words "and approved," and replaced with "on request."

(l) *Weepholes*. Chapter 7, "Wall Covering," Section 703, "Exterior Covering," Subsection 703.7, "Stone Masonry," 703.7.6, "Veneer Generally" shall be amended so as to delete the reference to "33 inches" and replace with "a maximum of 48 inches."

(m) *Energy Efficiency*. Chapter 11, "Energy Efficiency," Section N1104, "Lighting System," Subsection 1104.1, "Lighting Equipment," shall be deleted until enforcement is mandated by the State.

(n) *Plumbing generally*. Chapter 29, "Plumbing," In all instances, only copper or pex-al-pex shall be used under a concrete slab.

(o) *Water distribution pipe*. Chapter 29 "Plumbing," Section P2905, "Materials, joints and connections," subsection P2905.5, "Water Distribution Pipe" shall be amended by deleting "Brass pipe, Polybutylene (PB) plastic pipe and tubing, Polypropylene (PP) plastic pipe or tubing to be used for both hot and cold water," and adding "Aluminum Shielded pex pipe."

(p) *Electrical*. Chapters 34-41 shall be deleted and all references shall be replaced with Chapter 10 of the City of Temple Electrical Ordinance.

Section 7-63 – 7-80. Reserved.

ARTICLE V. PLUMBING CODE

Section 7-81. Amendments.

The City of Temple adopts certain amendments to the 2009 *International Plumbing Code*, which amendments shall be maintained in the Office of the Building Official.

Appendix A. Plumbing Fees.

The City Council shall adopt by resolution a schedule of the permit fees required or authorized by the 2009 *International Plumbing Code*, a copy of which shall be maintained in the office of the Building Official.

Table 906.1. The distance from water closet to vent stack is five feet (5'). If the depth of the flow line of sewer yard is more than 24" at any point, double wyes or combination wyes & 1/8 bends are to be used. A sewer yard line clean out is to be installed at junction of sewer yard line and City sewer

TABLE 906.1 DISTANCE OF FIXTURE TRAP FROM VENT

Size of Fixture	Size of Trap	Falls Per Foot	Distance from Trap
1 ¼"	1 ¼"	¼"	4'
1 ½"	1 ¼"	¼"	4'
1 ½"	1 ½"	¼"	4'
2"	1 ½"	¼"	5'
2"	2"	¼"	5'
*3"	3"	1/8 "	5'
*4"	4"	1/8"	5'

* Floor Drains Only 10' & 12' on 3" and 4"

(a) Chapter 6, "Water Supply and Distribution," Chapter 7, " Sanitary Drainage," and Chapter 9, "Vents," shall be amended as follows:

1. All references to air admittance valves shall be deleted.

2. All sinks and washer connections to have a cleanout at or near the foot of each vented waste or soil stack.

3. A dishwashing machine shall not be directly connected to a drainage system.

4. Cold water distribution ASTM D3309-85B may be used in readily accessible places only, not in walls, in or under slab foundations, or in attics.

Section 7-82. Plumbing Installation or Maintenance by Homeowner.

Nothing in this chapter shall prevent a homeowner from installing or maintaining plumbing within his own property boundaries, providing such plumbing work is done by himself and is used exclusively by him or his family. Such privilege does not convey the right to violate any of the provisions of this Chapter, nor is it to be construed as exempting any such property owner from obtaining a permit and paying the required fees thereof.

Section 7-83. Who May Obtain a Permit.

Permits may be issued *only* to the following:

(a) Master plumber licensed by the State of Texas of Plumbing Examiners;
(b) Property owner, for plumbing work to be done by him in a building owned and occupied by him as his home;
(c) Appliance dealer or dealer's employee, for connecting appliances to existing piping installation;
(d) Licensed landscape architects and irrigators.

Section 7-84. Inspection of backflow prevention assemblies.

International Plumbing Code, Section 312.9, "Inspection and testing of backflow prevention assemblies" is amended to include the following language:

312.9.3. Landscape irrigation systems are exempted from the annual testing and inspection requirement except where the following occurs:

(1) When chemicals are added to an irrigation system which is connected to the potable water supply; and

(2) When an irrigation system services property that is also served by an on-site sewage facility (septic system).

Section 7-84 – 7-93. Reserved.

ARTICLE VI. GAS CODE

Section 7-94. Adopted.

The City of Temple adopts as part of its Building regulations, the regulations, the 2009 *International Fuel Gas Code* as it exist now and as it may be revised from time to time. A copy of the 2009 *International Fuel Gas Code* shall be maintained in the office of the Building Official.

Section 7-95. Amendments.

The City of Temple adopts certain amendments to the 2009 *International Fuel Gas Code,* which amendments shall be maintained in the Office of the Building Official.

The City Council shall adopt by resolution a schedule of the permit fees required or authorized by the2009 *International Fuel Gas Code,* a copy of which shall be maintained in the office of the Building Official.

(a) *Air Testing Lines*. Chapter 4, "Gas Piping Instillations," Section 406, "Inspection, testing and purging," Subsection 406.4 "Test pressure measurement," shall be amended as follows:

The test with a diaphragm gage on gas house piping and service lines shall be made by closing all openings and subjecting the pipes to an air pressure of 3 to 5 ounces for at least fifteen (15) minutes under a constant temperature, the piping shall be considered sufficiently tight.

Section 7-96 Amendments.

The City of Temple adopts certain amendments to the 2009 *International Energy Code,* which amendments shall be maintained in the Office of the Building Official.

(a) Chapter 4, "Residential Energy Code," Table 402.1.1, "Insulation and Fenestration Requirements by Components," shall be amended by deleting requirements found in the "Glazed Fenestration SHGC" in "Climate Zone 2," until the state mandates these requirements.

Section 7-97 – 7-99 Reserved.

ARTICLE VII. LANDSCAPE IRRIGATION STANDARDS

Section 7-100. Definitions.

The following words and terms, when used in this ordinance, have the following meanings, unless the context clearly indicates otherwise.

(1) **Air gap**--A complete physical separation between the free flowing discharge end of a potable water supply pipeline and an open or non-pressure receiving vessel.

(2) **Backflow prevention**--The mechanical prevention of reverse flow, or back siphonage, of nonpotable water from an irrigation system into the potable water source.

(3) **Backflow prevention assembly**--Any assembly used to prevent backflow into a potable water system. The type of assembly used is based on the existing or potential degree of health hazard and backflow condition.

(4) **Completion of irrigation system installation**--When the landscape irrigation system has been installed, all minimum standards met, all tests performed, and the irrigator is satisfied that the system is operating correctly.

(5) **Consulting**--The act of providing advice, guidance, review or recommendations related to landscape irrigation systems.

(6) **Cross-connection**--An actual or potential connection between a potable water source and an irrigation system that may contain contaminates or pollutants or any source of water that has been treated to a lesser degree in the treatment process.

(7) **Design**--The act of determining the various elements of a landscape irrigation system that will include, but not be limited to, elements such as collecting site specific information, defining the scope of the project, defining plant watering needs, selecting and laying out emission devices, locating system components, conducting hydraulics calculations, identifying any local regulatory requirements, or scheduling irrigation work at a site. Completion of the various components will result in an irrigation plan.

(8) **Design pressure**--The pressure that is required for an emission device to operate properly. Design pressure is calculated by adding the operating pressure necessary at an emission device to the total of all pressure losses accumulated from an emission device to the water source.

(9) **Emission device**--Any device that is contained within an irrigation system and that is used to apply water. Common emission devices in an irrigation system include, but are not limited to, spray and rotary sprinkler heads, and drip irrigation emitters.

(10) **Employed**--Engaged or hired to provide consulting services or perform any activity relating to the sale, design, installation, maintenance, alteration, repair, or service to irrigation systems. A person is employed if that person is in an employer-employee relationship as defined by Internal Revenue Code, 26 United States Code Service, §3212(d) based on the behavioral control, financial control, and the type of relationship involved in performing employment related tasks.

(11) **Head-to-head spacing**--The spacing of spray or rotary heads equal to the manufacturers published radius of the head.

(12) **Health hazard**--A cross-connection or potential cross-connection with an irrigation system that involves any chemical additives that may, if introduced into the potable water supply, cause death or illness, spread disease, or have a high probability of causing such effects or when irrigation system services property that is also served by an on-site sewage facility (septic system).

(13) **Hydraulics**--The science of dynamic and static water; the mathematical computation of determining pressure losses and pressure requirements of an irrigation system.

(14) **Installer**--A person who actually connects an irrigation system to a private or public raw or potable water supply system or any water supply, who is licensed according to

Title 30, Texas Administrative Code, Chapter 30 (relating to Occupational Licenses and Registrations).

(15) **Irrigation inspector**--A person who inspects irrigation systems and performs other enforcement duties for a municipality or water district as an employee or as a contractor and is required to be licensed under Title 30, Texas Administrative Code, Chapter 30 (relating to Occupational Licenses and Registrations).

(16) **Irrigation plan**--A scaled drawing of a landscape irrigation system which lists required information, the scope of the project, and represents the changes made in the installation of the irrigation system.

(17) **Irrigation services--**Selling, designing, installing, maintaining, altering, repairing, servicing, permitting, providing consulting services regarding, or connecting an irrigation system to a water supply.

(18) **Irrigation system**--An assembly of component parts that is permanently installed for the controlled distribution and conservation of water to irrigate any type of landscape vegetation in any location, and/or to reduce dust or control erosion. This term does not include a system that is used on or by an agricultural operation as defined by Texas Agricultural Code, §251.002.

(19) **Irrigation technician**--A person who works under the supervision of a licensed irrigator to install, maintain, alter, repair, service or supervise installation of an irrigation system, including the connection of such system in or to a private or public, raw or potable water supply system or any water supply, and who is required to be licensed under Title 30, Texas Administrative Code, Chapter 30 (relating to Occupational Licenses and Registrations).

(20) **Irrigation zone**--A subdivision of an irrigation system with a matched precipitation rate based on plant material type (such as turf, shrubs, or trees), microclimate factors (such as sun/shade ratio), topographic features (such as slope) and soil conditions (such as sand, loam, clay, or combination) or for hydrological control.

(21) **Irrigator**--A person who sells, designs, offers consultations regarding, installs, maintains, alters, repairs, services or supervises the installation of an irrigation system, including the connection of such system to a private or public, raw or potable water supply system or any water supply, and who is required to be licensed under Title 30, Texas Administrative Code, Chapter 30.

(22) **Landscape Irrigation –** The science of applying the necessary amount of water to promote or sustain healthy growth of plant material or turf.

(23) **License**--An occupational license that is issued by the Texas Commission on Environmental Quality under Title 30, Texas Administrative Code, Chapter 30 to an individual that authorizes the individual to engage in an activity that is covered by Title 30, Texas Administrative Code, Chapter 30.

(24) **Mainline**--A pipe within an irrigation system that delivers water from the water source to the individual zone valves.

(25) **Maintenance checklist**--A document made available to the irrigation system's owner or owner's representative that contains information regarding the operation and maintenance of the irrigation system, including, but not limited to: checking and repairing the irrigation system, setting the automatic controller, checking the rain or moisture sensor, cleaning filters, pruning grass and plants away from irrigation emitters, using and operating the irrigation system, the precipitation rates of each irrigation zone within the system, any water conservation measures currently in effect from the water purveyor, the name of the water purveyor, a suggested seasonal or monthly watering schedule based on current evapotranspiration data for the geographic region, and the minimum water requirements for the plant material in each zone based on the soil type and plant material where the system is installed.

(26) **Major maintenance, alteration, repair, or service**--Any activity that involves opening to the atmosphere the irrigation main line at any point prior to the discharge side of any irrigation zone control valve. This includes, but is not limited to, repairing or connecting into a main supply pipe, replacing a zone control valve, or repairing a zone control valve in a manner that opens the system to the atmosphere.

(27) **Master valve**--A remote control valve located after the backflow prevention device that controls the flow of water to the irrigation system mainline.

(28) **Matched precipitation rate**--The condition in which all sprinkler heads within an irrigation zone apply water at the same rate**.**

(29) **New installation**--An irrigation system installed at a location where one did not previously exist .

(30) **Pass-through contract**--A written contract between a contractor or builder and a licensed irrigator or exempt business owner to perform part or all of the irrigation services relating to an irrigation system.

(31) **Potable water**--Water that is suitable for human consumption.

(32) **Pressure Vacuum Breaker**—An assembly containing an independently operating internally loaded check valve and an independently operating loaded air inlet valve located on the discharge side of the check valve. Also known as a Pressure Vacuum Breaker Back-siphonage Prevention Assembly.
(33) **Reclaimed water**--Domestic or municipal wastewater which has been treated to a quality suitable for beneficial use, such as landscape irrigation.

(34) **Records of landscape irrigation activities**—The irrigation plans, contracts, warranty information, invoices, copies of permits, and other documents that relate to the installation, maintenance, alteration, repair, or service of a landscape irrigation system.

(35) **Reduced Pressure Principle Backflow Prevention Assembly**--An assembly containing two independently acting approved check valves together with a hydraulically operating mechanically independent pressure differential relief valve located between the two check valves and below the first check valve.

(36) **Static water pressure**--The pressure of water when it is not moving.

(37) **Supervision**--The on-the-job oversight and direction by a licensed irrigator who is fulfilling his or her professional responsibility to the client and/or employer in compliance with local or state requirements. Also a licensed installer working under the direction of a licensed irrigator or beginning January 1, 2009, an irrigation technician who is working under the direction of a licensed irrigator to install, maintain, alter, repair or service an irrigation system.

(38) **Water conservation**--The design, installation, service, and operation of an irrigation system in a manner that prevents the waste of water, promotes the most efficient use of water, and applies the least amount of water that is required to maintain healthy individual plant material or turf, reduce dust, and control erosion.

(39) **Zone flow**--A measurement, in gallons per minute or gallons per hour, of the actual flow of water through a zone valve, calculated by individually opening each zone valve and obtaining a valid reading after the pressure has stabilized. For design purposes, the zone flow is the total flow of all nozzles in the zone at a specific pressure.

(40) **Zone valve**--An automatic valve that controls a single zone of a landscape irrigation system.

Section 7-101. Valid License Required.

Any person who connects an irrigation system to the water supply within the City or the City's extraterritorial jurisdiction, commonly referred to as the ETJ, must hold a valid license, as defined by Title 30, Texas Administrative Code, Chapter 30 and required by Chapter 1903 of the Texas Occupations Code, or as defined by Chapter 365, Title 22 of the Texas Administrative Code and required by Chapter 1301 of the Texas Occupations Code.

Exemptions

A property owner is not required to be licensed in accordance with Texas Occupations Code, Title 12, §1903.002(c)(1) if he or she is performing irrigation work in a building or on a premises owned or occupied by the person as the person's home. A home or property owner who installs an irrigation system must meet the standards contained in Title 30, Texas Administrative Code, Chapter 344 regarding spacing, water pressure, spraying water over impervious materials, rain or moisture shut-off devices or other technology, backflow prevention and isolation valves. A home or property owner must obtain a permit from the City, submit an irrigation plan, use an individual with a valid license to install backflow prevention devices, and submit test results of the backflow prevention device to the City. The City may, at any point, adopt more stringent requirements for a home or property owner who installs an

irrigation system. See Texas Occupations Code §1903.002 for other exemptions to the licensing requirement.

Section 7-102. Permit Required.

Any person installing an irrigation system within the territorial limits or extraterritorial jurisdiction of the City is required to obtain a permit from the City. Any applicant must submit a plan with the application demonstrating that the plan and irrigation system meet the requirements of this chapter. Any plan approved for a permit must be in compliance with the requirements of this chapter. Construction Safety administers the permit program in conjunction with the Water Department's approval of tested systems. Permit formats and processes are amended from time to time by the Construction Safety Department.

Exemptions

(1) An irrigation system that is an on-site sewage disposal system, as defined by Section 355.002, Health and Safety Code; or

(2) An irrigation system used on or by an agricultural operation as defined by Section 251.002, Agriculture Code; or

(3) An irrigation system connected to a groundwater well used by the property owner for domestic use.

Section 7-103. Backflow Prevention Methods and Devices.

(a) Any irrigation system that is connected to the potable water supply must be connected through a backflow prevention method approved by the Texas Commission on Environmental Quality (TCEQ). The backflow prevention device must be approved by the American Society of Sanitary Engineers; or the Foundation for Cross-Connection Control and Hydraulic Research, University of Southern California; or the Uniform Plumbing Code; or any other laboratory that has equivalent capabilities for both the laboratory and field evaluation of backflow prevention assemblies. The backflow prevention device must be installed in accordance with the laboratory approval standards or if the approval does not include specific installation information, the manufacturer's current published recommendations.

(b) In new installations of landscape irrigation systems one of the following methods must be used to prevent backflow;

(1) Reduced pressure principle backflow prevention assemblies may be used if:

a. the device is installed at a minimum of 12 inches above ground in a location that will ensure that the assembly will not be submerged; and

b. drainage is provided for any water that may be discharged through the assembly relief valve.

(2) Pressure vacuum breakers may be used if:

a. no back-pressure condition will occur; and

b. the device is installed at a minimum of 12 inches above any sprinklers are measured from the retracted position from the top of the sprinkler.

(c) Existing irrigation systems which are not of the type listed in 7-103(b) may remain, however upon replacement, homeowner must comply with the required devices listed in 7-103(b).

(d) Backflow prevention devices used in applications designated as health hazards must be tested upon installation and annually thereafter. The following situations have been deemed by the City to create a health hazard:

(1) When chemicals are added to an irrigation system which is connected to the potable water supply; and

(2) When an irrigation system services property that is also served by an on-site sewage facility (septic system).

(e) If an irrigation system is connected to a potable water supply through a pressure vacuum breaker or reduced pressure principle backflow assembly and includes an automatic master valve on the system, the automatic master valve must be installed on the discharge side of the backflow prevention assembly.

(f) The irrigator shall ensure the backflow prevention device is tested by a licensed Backflow Prevention Assembly Tester prior to being placed in service and the test results provided to the local water purveyor and the irrigation system's owner or owner's representative within ten business days of testing of the backflow prevention device.

Section 7-104. Specific Conditions and Cross-Connection Control.

(a) Before any chemical is added to an irrigation system connected to the potable water supply, the irrigation system must be connected through a reduced pressure principle backflow prevention assembly.

(b) Connection of any additional water source to an irrigation system that is connected to the potable water supply can only be done if the irrigation system is connected to the potable water supply through a reduced-pressure principle backflow prevention assembly.

(c) Irrigation system components with chemical additives induced by aspiration, injection, or emission system connected to any potable water supply must be connected through a reduced pressure principle backflow device.

(d) If an new irrigation system is designed or installed on a property that is served by an on-site sewage facility, as defined in Title 30, Texas Administrative Code, Chapter 285, then:

(1) all irrigation piping and valves must meet the separation distances from the On-Site Sewage Facilities system as required for a private water line in Title 30, Texas Administrative Code, Section 285.91(10);

(2) any connections using a private or public potable water source that is not the City's potable water system must be connected to the water source through a reduced pressure principle backflow prevention assembly as defined in Title 30, Texas Administrative Code, Section 344.50; and

(3) any water from the irrigation system that is applied to the surface of the area utilized by the On-Site Sewage Facility system must be controlled on a separate irrigation zone or zones so as to allow complete control of any irrigation to that area so that there will not be excess water that would prevent the On-Site Sewage Facilities system from operating effectively.

Section 7-105. Water Conservation.

All irrigation systems shall be designed, installed, maintained, altered, repaired, serviced, and operated in a manner that will promote water conservation as defined in the Definitions section of this ordinance.

Section 7-106. Irrigation Plan Design: Minimum Standards.

(a) An irrigator shall prepare an irrigation plan for each site where a new irrigation system will be installed. A paper or electronic copy of the irrigation plan must be on the job site at all times during the installation of the irrigation system. A drawing showing the actual installation of the system is due to each irrigation system owner after all new irrigation system installations. During the installation of the irrigation system, variances from the original plan may be authorized by the licensed irrigator if the variance from the plan does not:

(1) diminish the operational integrity of the irrigation system;

(2) violate any requirements of this ordinance; and

(3) go unnoted in red on the irrigation plan.

(b) The irrigation plan must include complete coverage of the area to be irrigated. If a system does not provide complete coverage of the area to be irrigated, it must be noted on the irrigation plan.

(c) All irrigation plans used for construction must be drawn to scale. The plan must include, at a minimum, the following information:

(1) the irrigator's seal, signature, and date of signing;

(2) all major physical features and the boundaries of the areas to be watered;

(3) a North arrow;

(4) a legend;

(5) the zone flow measurement for each zone;

(6) location and type of each:

a. controller; and

b. sensor (for example, but not limited to, rain, moisture, wind, flow, or freeze);

(7) location, type, and size of each:

a. water source, such as, but not limited to a water meter and point(s) of connection;

b. backflow prevention device;

c. water emission device, including, but not limited to, spray heads, rotary sprinkler heads, quick-couplers, bubblers, drip, or micro-sprays;

d. valve, including but not limited to, zone valves, master valves, and isolation valves;

e. pressure regulation component; and

f. main line and lateral piping.

(8) the scale used; and

(9) the design pressure.

Section 7-107. Design and Installation: Minimum Requirements.

(a) No irrigation design or installation shall require the use of any component, including the water meter, in a way which exceeds the manufacturer's published performance limitations for the component.

(b) Spacing.

(1) The maximum spacing between emission devices must not exceed the manufacturer's published radius or spacing of the device(s). The radius or spacing

is determined by referring to the manufacturer's published specifications for a specific emission device at a specific operating pressure.

(2) New irrigation systems shall not utilize above-ground spray emission devices in landscapes that are less than 48 inches not including the impervious surfaces in either length or width and which contain impervious pedestrian or vehicular traffic surfaces along two or more perimeters. If pop-up sprays or rotary sprinkler heads are used in a new irrigation system, the sprinkler heads must direct flow away from any adjacent surface and shall not be installed closer than four inches from a hardscape, such as, but not limited to, a building foundation, fence, concrete, asphalt, pavers, or stones set with mortar.

(3) Narrow paved walkways, jogging paths, golf cart paths or other small areas located in cemeteries, parks, golf courses or other public areas may be exempted from this requirement if the runoff drains into a landscaped area.

(c) Water pressure. Emission devices must be installed to operate at the minimum and not above the maximum sprinkler head pressure as published by the manufacturer for the nozzle and head spacing that is used. Methods to achieve the water pressure requirements include, but are not limited to, flow control valves, a pressure regulator, or pressure compensating spray heads.

(d) Piping. Piping in irrigation systems must be designed and installed so that the flow of water in the pipe will not exceed a velocity of five feet per second for polyvinyl chloride (PVC) pipe.

(e) Irrigation Zones. Irrigation systems shall have separate zones based on plant material type, microclimate factors, topographic features, soil conditions, and hydrological requirements.

(f) Matched precipitation rate. Zones must be designed and installed so that all of the emission devices in that zone irrigate at the same precipitation rate.

(g) Irrigation systems shall not spray water over surfaces made of concrete, asphalt, brick, wood, stones set with mortar, or any other impervious material, such as, but not limited to, walls, fences, sidewalks, streets, etc.

(h) Master valve. When provided, a master valve shall be installed on the discharge side of the backflow prevention device on all new installations.

(i) PVC pipe primer solvent. All new irrigation systems that are installed using PVC pipe and fittings shall be primed with a colored primer prior to applying the PVC cement in accordance with the Uniform Plumbing Code (Section 316) or the International Plumbing Code (Section 605).

(j) Rain or moisture shut-off devices or other technology. All new automatically controlled irrigation systems must include sensors or other technology designed to inhibit or interrupt operation of the irrigation system during periods of moisture or rainfall. Rain

or moisture shut-off technology must be installed according to the manufacturer's published recommendations. Repairs to existing automatic irrigation systems that require replacement of an existing controller must include a sensor or other technology designed to inhibit or interrupt operation of the irrigation system during periods of moisture or rainfall.

(k) Isolation valve. All new irrigation systems must include an isolation valve between the water meter and the backflow prevention device.

(l) Depth coverage of piping. Piping in all irrigation systems must be installed according to the manufacturer's published specifications for depth coverage of piping.

(1) If the manufacturer has not published specifications for depth coverage of piping, the piping must be installed to provide minimum depth coverage of six inches of select backfill, between the top of the pipe and the natural grade of the topsoil. All portions of the irrigation system that fail to meet this standard must be noted on the irrigation plan. If the area being irrigated has rock at a depth of six inches or less, select backfill may be mounded over the pipe. Mounding must be noted on the irrigation plan and discussed with the irrigation system owner or owner's representative to address any safety issues.

(2) If a utility, man-made structure, or roots create an unavoidable obstacle, which makes the six-inch depth coverage requirement impractical, the piping shall be installed to provide a minimum of two inches of select backfill between the top of the pipe and the natural grade of the topsoil.

(3) All trenches and holes created during installation of an irrigation system must be backfilled and compacted to the original grade.

(m) Wiring irrigation systems.

(1) Underground electrical wiring used to connect an automatic controller to any electrical component of the irrigation system must be listed by Underwriters Laboratories as acceptable for burial underground.

(2) Electrical wiring that connects any electrical components of an irrigation system must be sized according to the manufacturer's recommendation.

(3) Electrical wire splices which may be exposed to moisture must be waterproof as certified by the wire splice manufacturer.

(4) Underground electrical wiring that connects an automatic controller to any electrical component of the irrigation system must be buried with a minimum of six inches of select backfill.

(n) Water contained within the piping of an irrigation system is deemed to be non-potable. No drinking or domestic water usage, such as, but not limited to, filling swimming pools or decorative fountains, shall be connected to an irrigation system. If a

hose bib (an outdoor water faucet that has hose threads on the spout) is connected to an irrigation system for the purpose of providing supplemental water to an area, the hose bib must be installed using a quick coupler key on a quick coupler installed in a covered purple valve box and the hose bib and any hoses connected to the bib must be labeled "non potable, not safe for drinking." An isolation valve must be installed upstream of a quick coupler connecting a hose bib to an irrigation system.

(o) Beginning January 1, 2010, either a licensed irrigator or a licensed irrigation technician shall be on-site at all times while the landscape irrigation system is being installed. When an irrigator is not onsite, the irrigator shall be responsible for ensuring that a licensed irrigation technician is on-site to supervise the installation of the irrigation system.

Section 7-108. Completion of Irrigation System Installation.

Upon completion of the irrigation system, the irrigator or irrigation technician who provided supervision for the on-site installation shall be required to complete four items:

(1) a final "walk through" with the irrigation system's owner or the owner's representative to explain the operation of the system;

(2) The maintenance checklist on which the irrigator or irrigation technician shall obtain the signature of the irrigation system's owner or owner's representative and shall sign, date, and seal the checklist. If the irrigation system's owner or owner's representative is unwilling or unable to sign the maintenance checklist, the irrigator shall note the time and date of the refusal on the irrigation system's owner or owner's representative's signature line. The irrigation system owner or owner's representative will be given the original maintenance checklist and a duplicate copy of the maintenance checklist shall be maintained by the irrigator. The items on the maintenance checklist shall include but are not limited to:

a. the manufacturer's manual for the automatic controller, if the system is automatic;

b. a seasonal (spring, summer, fall, winter) watering schedule based on either current/real time evapotranspiration or monthly historical reference evapotranspiration (historical ET) data, monthly effective rainfall estimates, plant landscape coefficient factors, and site factors;

c. a list of components, such as the nozzle, or pump filters, and other such components that require maintenance and the recommended frequency for the service; and

d. the statement, "This irrigation system has been installed in accordance with all applicable state and local laws, ordinances, rules, regulations or orders. I have tested the system and determined that it has been installed according to the Irrigation Plan and is

properly adjusted for the most efficient application of water at this time."

(3) A permanent sticker which contains the irrigator's name, license number, company name, telephone number and the dates of the warranty period shall be affixed to each automatic controller installed by the irrigator or irrigation technician. If the irrigation system is manual, the sticker shall be affixed to the original maintenance checklist. The information contained on the sticker must be printed with waterproof ink and include:

(4) The irrigation plan indicating the actual installation of the system must be provided to the irrigation system's owner or owner representative.

Section 7-109. Maintenance, Alteration, Repair, or Service of Irrigation Systems.

(a) The licensed irrigator is responsible for all work that the irrigator performed during the maintenance, alteration, repair, or service of an irrigation system during the warranty period. The irrigator or business owner is not responsible for the professional negligence of any other irrigator who subsequently conducts any irrigation service on the same irrigation system.

(b) All trenches and holes created during the maintenance, alteration, repair, or service of an irrigation system must be returned to the original grade with compacted select backfill.

(c) Colored PVC pipe primer solvent must be used on all pipes and fittings used in the maintenance, alteration, repair, or service of an irrigation system in accordance with the Uniform Plumbing Code (Section 316) or the International Plumbing Code (Section 605).

(d) When maintenance, alteration, repair or service of an irrigation system involves excavation work at the water meter or backflow prevention device, an isolation valve shall be installed, if an isolation valve is not present.

Section 7-110. Reclaimed Water.

Reclaimed water may be utilized in landscape irrigation systems if:
(1) there is no direct contact with edible crops, unless the crop is pasteurized before consumption;
(2) the irrigation system does not spray water across property lines that do not belong to the irrigation system's owner;
(3) the irrigation system is installed using purple components;
(4) the domestic potable water line is connected using an air gap or a reduced pressure principle backflow prevention device, in accordance with Title 30, Texas Administrative Code, Section 290.47(i) (relating to Appendices);

(5) a minimum of an eight inch by eight inch sign, in English and Spanish, is prominently posted on/in the area that is being irrigated, that reads, "RECLAIMED WATER – DO NOT DRINK" and "AGUA DE RECUPERACIÓN – NO BEBER"; and
(6) backflow prevention on the reclaimed water supply line shall be in accordance with the regulations of the City's water provider.

Section 7-111. Advertisement Requirements.

(a) All vehicles used in the performance of irrigation installation, maintenance, alteration, repair, or service must display the irrigator's license number in the form of "LI_____" in a contrasting color of block letters at least two inches high, on both sides of the vehicle.

(b) All forms of written and electronic advertisements for irrigation services must display the irrigator's license number in the form of "LI_____." Any form of advertisement, including business cards, and estimates which displays an entity's or individual's name other than that of the licensed irrigator must also display the name of the licensed irrigator and the licensed irrigator's license number. Trailers that advertise irrigation services must display the irrigator's license number.

(c) The name, mailing address, and telephone number of the commission must be prominently displayed on a legible sign and displayed in plain view for the purpose of addressing complaints at the permanent structure where irrigation business is primarily conducted and irrigation records are kept.

Section 7-112. Contracts.

(a) All contracts to install an irrigation system must be in writing and signed by each party and must specify the irrigator's name, license number, business address, current business telephone numbers, the date that each party signed the agreement, the total agreed price, and must contain the statement, "Irrigation in Texas is regulated by the Texas Commission on Environmental Quality (TCEQ), MC-178, P.O. Box 13087, Austin, Texas 78711-3087. TCEQ's website is: www. tceq.state.tx.us." All contracts must include the irrigator's seal, signature, and date.

(b) All written estimates, proposals, bids, and invoices relating to the installation or repair of an irrigation system(s) must include the irrigator's name, license number, business address, current business telephone number(s), and the statement: "Irrigation in Texas is regulated by the Texas Commission On Environmental Quality (TCEQ) (MC-178), P.O. Box 13087, Austin, Texas 78711-3087. TCEQ's web site is: www.tceq.state.tx.us."

(c) An individual who agrees by contract to provide irrigation services as defined in Title 30, Texas Administrative Code, Section 344.30 (relating to License Required) shall hold an irrigator license issued under Title 30, Texas Administrative Code, Chapter 30 (relating to Occupational Licenses and Registrations) unless the contract is a pass-through contract as defined in Title 30, Texas Administrative Code, Section 344.1(36)

(relating to Definitions). If a pass-through contract includes irrigation services, then the irrigation portion of the contract can only be performed by a licensed irrigator. If an irrigator installs a system pursuant to a pass-through contract, the irrigator shall still be responsible for providing the irrigation system's owner or through contract, the irrigator shall still be responsible for providing the irrigation system's owner or owner's representative a copy of the warranty and all other documents required under this chapter. A pass-through contract must identify by name and license number the irrigator that will perform the work and must provide a mechanism for contacting the irrigator for irrigation system warranty work.

(d) The contract must include the dates that the warranty is valid.

Section 7-113. Warranties for Systems.

(a) On all installations of new irrigation systems, an irrigator shall present the irrigation system's owner or owner's representative with a written warranty covering materials and labor furnished in the new installation of the irrigation system. The irrigator shall be responsible for adhering to terms of the warranty. If the irrigator's warranty is less than the manufacturer's warranty for the system components, then the irrigator shall provide the irrigation system's owner or the owner's representative with applicable information regarding the manufacturer's warranty period. The warranty must include the irrigator's seal, signature, and date. If the warranty is part of an irrigator's contract, a separate warranty document is not required.

(b) An irrigator's written warranty on new irrigation systems must specify the irrigator's name, business address, and business telephone number(s), must contain the signature of the irrigation system's owner or owner's representative confirming receipt of the warranty and must include the statement: "Irrigation in Texas is regulated by the Texas Commission on Environmental Quality (TCEQ), MC-178, P.O. Box 130897, Austin, Texas 78711-3087. TCEQ's website is: www.tceq.state.tx.us."

(c) On all maintenance, alterations, repairs, or service to existing irrigation systems, an irrigator shall present the irrigation system's owner or owner's representative a written document that identifies the materials furnished in the maintenance, alteration, repair, or service. If a warranty is provided, the irrigator shall abide by the terms. The warranty document must include the irrigator's name and business contact information.

Section 7-114. Duties and Responsibilities of City Irrigation Inspectors.

A licensed irrigation inspector shall enforce the ordinance of the City, and shall be responsible for:

(1) verifying that the appropriate permits have been obtained for an irrigation system and that the irrigator and installer or irrigation technician, if applicable, are licensed;

(2) inspecting the irrigation system;

(3) determining that the irrigation system complies with the requirements of this chapter;

(4) determining that the appropriate backflow prevention device was installed, tested, and test results provided to the City;

(5) investigating complaints related to irrigation system installation, maintenance, alteration, repairs, or service of an irrigation system and advertisement of irrigation services; and

(6) maintaining records according to this chapter.

Section 7-115. Items not covered by this ordinance.

Any item not covered by their ordinance and required by law shall be governed by the Texas Occupations Code, the Texas Water Code, Title 30 of the Texas Administrative Code, and any other applicable state statute or Texas Commission on Environmental Quality rule.

Section 7-116. Fees.

The City Council may create a schedule of fees for obtaining and renewing an irrigation permit. These fees will be in amounts sufficient to cover the City's costs in issuing and renewing the permits, including, but not limited to, staff time and other overhead costs. The City Council shall adopt by resolution a schedule of the permit fees required or authorized. This schedule of fees is entitled Construction Permit Fees and is updated from time to time by Resolution. It is kept at City offices and also available online.

Section 7-117. Enforcement.

(a) The City shall have the power to administer and enforce the provisions of this chapter as may be required by governing law. Any person, firm, corporation or agent who shall violate a provision of this code, or fails to comply therewith, or with any of the requirements thereof, is subject to suit for injunctive relief as well as prosecution for criminal violations. Any violation of the ordinance codified in this chapter is declared to be a nuisance.

(b) Any person violating any provision of chapter shall, upon conviction, be fined a sum not exceeding $2000.00. Each day that a provision of this chapter is violated shall constitute a separate offense. An offense under this chapter is a Class C misdemeanor, punishable by a fine of up to $2000.00.

(c) Nothing in this chapter shall be construed as a waiver of the City's right to bring a civil action to enforce the provisions of this chapter and to seek remedies as allowed by law, including, but not limited to the following:

(1) Injunctive relief to prevent specific conduct that violates the ordinance or to require specific conduct that is necessary for compliance with the ordinance; and

(2) Other available relief.

(REVISED: Ordinance No. 2011-4484, November 17, 2011)